

Having received the caller information via the PC interface 4 of the apparatus (step S10), the software of the computer 8 accesses a database stored in the hard disk device 10 to read therefrom detailed information related to the received caller information (step S11) and then displays the detailed information on the display 8a as shown in the display example 12 of FIG. 1 (step S12). It is therefore possible to obtain partner's information in the past.

As described above, in accordance with the communicating apparatus of the embodiment, the application software of the personal computer can be initiated in association with the closing of the telephone line. Consequently, detailed information of the partner can be read from the storage of the computer 8 to be displayed on the screen, namely, it is possible to confirm the partner's detailed information before the telephone speech is started.

Subsequently, description will be given of a function to input memos in the system. Detailed information of a partner as a call originator can be inputted from a memo input screen to the system during or after a speech. When the external telephone 14 is set to the off-hook state or the memory input screen is activated in the directory application software, the processing of FIG 5 is executed and then the memo input screen is displayed as the display example 13 of FIG 1. In this situation, the user can input a record of the speech with the call originating partner to the system (step S13).

For example, when the user inputs the contents of speech to the system and terminates the computer application software, a record of the contents thus inputted is stored in the hard disk device 10 corresponding to caller information of the partner (step S14). Thanks to the provision, when a call is received from the same partner, the contents previously recorded can be displayed on the screen.

Referring next to FIG. 6, description will be given of an alternative embodiment of the communicating apparatus in accordance with the present invention. This embodiment differs in the operating procedure from the preceding embodiment. In FIG. 6, when a bell signal is received via the network 1, the external telephone 14 rings. On this occasion, the bell signal detector 2b detects the reception of the bell signal to send information of the signal detection to the central control unit 7. As a result, bell signal detection information is passed from the central control unit 7 via the serial interface to the computer 8 (step S1). Simultaneously, under supervision of the line controller 2, the caller ID detector 6 senses information of the originating partner, i.e., caller information to notify the information to the central control unit 7. The central control unit 7 immediately transmits the caller information via the serial interface to the computer 8 (step S2).

In the computer 8, the application initiation request unit 9 continuously monitors the serial interface thereof to detect a bell signal event sent thereto. When such an event is received (step S5), the unit 9 immediately activates the directory application software (step S6). On receiving thereafter caller information from the communicating apparatus (step S7), the computer 8 accesses by the software the database stored in the hard disk device 10 to obtain a caller name corresponding to the notified caller information and then displays the name on the screen (step S8).

Recognizing the ringing of the telephone 14, the user raises the handset of the telephone 14 to set the off-hook state. This causes a current to flow between two wires of the telephone line to lower the voltage therebetween. The off-hook detector 2a then detects the voltage drop (step S3) and sends off-hook information via the serial interface to the computer 8 (step S4).

Having received the off-hook information, the computer 8 reads by the software the database in the disk device 10 to attain detailed information associated with the caller information (step S9) and then presents the detailed information on the display 8a as shown in the display example 12 of FIG 1 (step 10).

In accordance with the communication apparatus of this embodiment described above, immediately after the reception of the bell signal the directory application software is initiated in the computer 8 before the user raises the handset of the telephone 14. Consequently, the user can visually check the caller information as early as possible. In addition, when the caller information transmitted together with the bell signal is detected, only the caller name corresponding to the caller information is read by the directory application software to be presented on the display. This advantageously reduces the period of time to access the objective item. The user can recognize the caller name during quite a short period of time after the telephone bell starts ringing to thereby recognize whether or not the handset is to be raised.

In the example above, the telephone speech is accomplished by an external telephone. However, the communicating apparatus of the present invention may be a facility including a function of voice speech, i.e., a voice amplifying function, a handset, and the like. In operation of any communicating apparatus integrally including the voice speech function, the directory application software can be initiated in the personal computer only by raising the handset thereof. Only by specifying a call terminating partner in a directory list, a telephone number of the partner can be automatically transmitted therefrom, which advantageously simplify the telephone operation.

Furthermore, the communicating apparatus in accordance with the present invention may include, for example, an image reading device for facsimile communication. After the contents of a manuscript are read by the image reader, the user can initiate the directory application software in the computer by a simple operation to close the line, i.e., by depressing an off-hook or monitor button. The user then need only specify a call terminating partner in a directory list to automatically send a telephone number of the partner therefrom.

As above, in accordance with the present invention, there is provided a communicating apparatus in which when the user to easily carry out a telephone speech with an external telephone of a personal computer, the troublesome operation and knowledge required to make a search for a telephone or telephone directory application software of the computer become unnecessary, which advantageously facilitates the telephone operation.

While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by those embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the scope and spirit of the present invention.

We claim:

1. A communicating apparatus, comprising:

line control means connected to a telephone line for conducting a line control operation including a dialing operation.

bell signal detection means for detecting a bell signal to produce a detection information when the bell signal is received from the telephone line;

caller information detecting means for detecting a caller telephone number notified to a call receiver by a caller telephone number notification service;

7

interface means for controlling a serial communication with a personal computer, and

central control means for transmitting through the interface 1) the bell signal detection information for activating a telephone computer directory software in the personal computer, and 2) immediately after a time when the bell signal is received, transmitting the caller telephone number which is detected by said caller information detecting means for causing the telephone computer directory application software to access and display information stored in the computer that is associated with the caller telephone number

2. A communicating apparatus according to claim 1, further comprising:

a handset having a function for voice speech or a voice amplifying function;

means for closing the telephone line in accordance with a state of the handset; and

off-hook detecting means for detecting an event that the telephone line is closed at initiation of communication;

said central control means transmitting information of the detection from the off-hook detecting means to a directory application initiation request means integrally included in the personal computer for activating the telephone computer directory software in the personal computer when a call is originated from the communication apparatus.

3. A communicating apparatus according to claim 1, further comprising:

image reading means for facsimile communication;

operation means for a user to close a line before initiating the facsimile communication, and

off-hook detecting means for detecting an event that the telephone line is closed at initiation of communication;

said central control means transmitting information of the detection from the off-hook detecting means to a directory application initiation request means integrally included in the personal computer for activating the telephone computer directory software in the personal computer when the line is closed before initiating the facsimile communication.

4. A communicating apparatus according to claim 1, further comprising:

off-hook detecting means for detecting an event that the telephone line is closed at initiation of communication; wherein the central control means for transmitting through the interface means transmits:

a) information of the detection from the off-hook detecting means to a directory application initiation request means incorporated in the personal computer

8

for activating the telephone computer directory software in the personal computer when a call is originated from the communicating apparatus, and

b) information of the detection from the off-hook detecting means subsequent to detection of the bell signal for causing the telephone computer directory software to display further information stored in the computer that is associated with the caller telephone number.

5. A communicating apparatus according to claim 1, further comprising:

off-hook detecting means for detecting an event that the telephone line is closed at initiation of communication and outputting off-hook detection information;

a personal computer in which directory application software is loaded; and

application software initiation request means for initiating the directory application software in the personal computer in response to the off-hook detection information when a call is originated from the communicating apparatus and in response to the bell signal detection information when a call is received by the communicating apparatus.

6. A communicating apparatus, according to claim 1, further comprising:

a modem connected to an external data communication device for conducting data communication;

a transformer for interrupting a direct current and for achieving a two-wire to four-wire transforming operation;

a receiver-side amplifier installed in a signal path on a receiver side;

a caller-side amplifier installed in a signal path on a caller side;

off-hook detecting means including a photo-interrupter for producing detection information in accordance with a voltage between a chip wire and a ring wire;

bell signal detecting means including a photo-interrupter for producing detection information at an output terminal end thereof when a bell signal is received via a telephone network;

a microphone and a speaker arranged for a speech without using hands;

an amplifier for amplifying a signal outputted from the microphone;

an amplifier for sounding the speaker; and

switching means for establishing and changing connections between the receiver side and the caller side.

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